Amendments to the Claims:

This listing of claims will replace all prior versions and listing of claims in the application.

Claims 1-11 are amended.

Listing of Claims:

1. (Currently Amended) ~~Device~~ A device for a mode-locking laser, ~~in particular a laser of pulsed type,~~ comprising a resonant cavity,

- delimited by a first mirror and a second mirror,

- provided with an active laser gain medium arranged in the resonant cavity for amplifying a laser radiation beam at the fundamental frequency, and

- with a solid non-linear optical means which comprises at least said second mirror, for reversible conversion of the radiation at the fundamental frequency into radiation at a harmonic frequency, said non-linear optical means having a reflection coefficient which increases as the intensity of the radiation at the fundamental frequency increases,

said device further comprising a solid intensity limiter, arranged in the resonant cavity, whose transmission coefficient of the laser radiation passively decreases as the intensity of said radiation increases, wherein said intensity limiter comprises a GaAs, CdSe or InP plate.

2. (Currently Amended) ~~Device~~ The device according to claim 1, ~~characterized in that~~ wherein the non-linear optical means corresponds to a dichroic mirror and a non-linear crystal ~~able to convert~~ that converts the radiation at the fundamental frequency into radiation at a harmonic frequency.

3. (Currently Amended) ~~Device~~ The device according to claim 1, ~~characterized in that~~ wherein the non-linear optical means comprises said second mirror which corresponds to a dichroic mirror, a non-linear crystal ~~able to convert~~ that converts the radiation at the fundamental frequency into radiation at a harmonic frequency, and at lest one component for polarization selection and/or modification.

4. (Currently Amended) ~~Device~~ The device according to Claim 2, ~~characterized in that~~ wherein said non-linear crystal is a BBO crystal.

5. (Currently Amended) ~~Device~~ The device according to one of claim 1, ~~characterized in that~~ wherein the non-linear optical means comprises only the second mirror, wherein said second mirror corresponds to a Fabry-Perot anti-resonant saturable absorber constructed from a superposition of dielectric or metallic semiconductor films.

6. (Currently Amended) ~~Device~~ The device according to Claim 1, ~~characterized in that~~ wherein the intensity limiter and the non-linear optical means are placed on either side of the active gain medium.

7. (Currently Amended) ~~Device~~ The device according to Claim 1, ~~characterized in that~~ wherein the intensity limiter is placed between the non-linear optical means and the active gain medium.

8. (Currently Amended) ~~Device~~ The device according to Claim 1, ~~characterized in that~~ wherein the active gain medium is an Nd:YAG crystal.

9. (Currently Amended) ~~Device~~ The device according to Claim 1, ~~characterized in that~~ wherein the non-linear optical means has a reflection coefficient of the radiation at the second harmonic which is greater than the reflection coefficient of the radiation at the fundamental frequency.

10. (Currently Amended) ~~Device~~ A device for a mode-locking a laser~~, in particular a laser of pulsed type~~, comprising a resonant cavity,

-delimited by a first mirror and a second mirror,

- provided with an active laser gain medium arranged in the resonant cavity for amplifying a laser radiation beam at the fundamental frequency, and

- a solid non-linear optical means which comprises at least said second mirror, for reversible conversion of the radiation at the fundamental frequency into radiation at a harmonic frequency, said non-linear optical means having a reflection coefficient which increases as the intensity of the radiation at the fundamental frequency increases,

~~characterized in that~~ wherein said device is provided with an intensity limiter comprising a GaAs, CdSe or InP plate with a transmission coefficient which passively decreases as the intensity of the radiation at the fundamental frequency increases, so as to ensure, in combination with said non-linear optical means, both a positive feedback and a negative feedback on the quality factor of the resonant cavity.

11. (Currently Amended) ~~Process~~ A process for a mode-locking a laser~~, in particular a laser of pulsed type, characterized in that it comprises~~comprising:

- emitting a laser radiation beam at the fundamental frequency by stimulating an active laser medium,

- converting the beam at the fundamental frequency into a beam at a harmonic frequency,

- returning the beam at the harmonic frequency to the resonant cavity,

- reconverting the beam at the harmonic frequency into a beam at the fundamental frequency, and

- passively limiting the intensity of the beam at the fundamental frequency inside the resonant cavity, by means of at least one GaAs, CdSe or InP plate.